

## LL 5.08/18/90 3.2SN OR BX

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

32760 Detmold

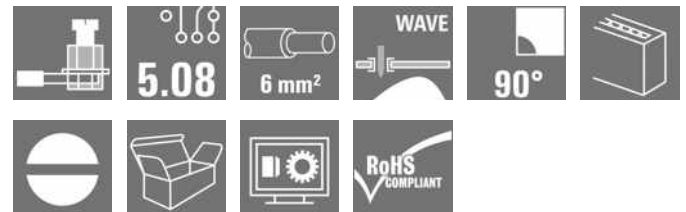
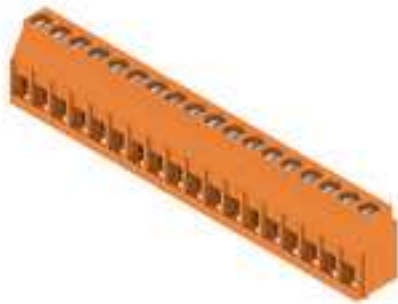
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### Product image



This PCB terminal provides connections for 32 A and 6 mm<sup>2</sup> conductor cross-section with the proven clamping-yoke connection, in 5.00 and 5.08 mm pitch. 90° conductor outlet direction.

### General ordering data

|              |  |
|--------------|--|
| Version      | Printed circuit board terminals, 5.08 mm, Number of poles: 18, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Clamping yoke connection, Clamping range, max.: 6 mm <sup>2</sup> , Box |
| Order No.    | <a href="#">1001990000</a>   |
| Type         | LL 5.08/18/90 3.2SN OR BX  |
| GTIN (EAN)   | 4032248693955  |
| Qty.         | 20 pc(s).  |
| Product data | IEC: 500 V / 32.5 A / 0.5 - 6 mm <sup>2</sup><br>UL: 300 V / 20 A / AWG 26 - AWG 12  |
| Packaging    | Box  |

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## Technical data

## Dimensions and weights

|                          |            |                 |            |
|--------------------------|------------|-----------------|------------|
| Depth                    | 11 mm      | Depth (inches)  | 0.433 inch |
| Height                   | 20.3 mm    | Height (inches) | 0.799 inch |
| Height of lowest version | 17.1 mm    | Width           | 92.09 mm   |
| Width (inches)           | 3.626 inch | Net weight      | 28.15 g    |

## Temperatures

|                             |        |                             |        |
|-----------------------------|--------|-----------------------------|--------|
| Operating temperature, min. | -50 °C | Operating temperature, max. | 120 °C |
|-----------------------------|--------|-----------------------------|--------|

## System parameters

|  |                             |  |                          |
|--|-----------------------------|--|--------------------------|
| Product family                               | OMNIMATE Signal - series LL | Wire connection method                     | Clamping yoke connection |
| Property, clamping point                     | WireReady                   | Mounting onto the PCB                      | THT solder connection    |
| Conductor outlet direction                   | 90°                         | Pitch in mm (P)                            | 5.08 mm                  |
| Pitch in inches (P)                          | 0.2 inch                    | Number of poles                            | 18                       |
| Pin series quantity                          | 1                           | Fitted by customer                         | Yes                      |
| Number of rows                               | 1                           | Max. adjacent poles per row                | 24                       |
| Solder pin length (l)                        | 3.2 mm                      | Solder pin dimensions                      | 0.75 x 0.9 mm            |
| Solder eyelet hole diameter (D)              | 1.3 mm                      | Solder eyelet hole diameter tolerance (D)  | + 0,1 mm                 |
| Number of solder pins per pole               | 1                           | Screwdriver blade                          | 0.6 x 3.5                |
| Screwdriver blade standard                   | DIN 5264                    | Tightening torque, min.                    | 0.5 Nm                   |
| Tightening torque, max.                      | 0.6 Nm                      | Clamping screw                             | M 3                      |
| Stripping length                             | 6 mm                        | L1 in mm                                   | 86.36 mm                 |
| L1 in inches                                 | 3.4 inch                    | Touch-safe protection acc. to DIN VDE 0470 | IP 20                    |
| Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch      | Protection degree                          | IP20                     |
| Volume resistance                            | 1.20 mΩ                     |  |                          |

## Material data

|                                       |                  |                                       |        |
|---------------------------------------|------------------|---------------------------------------|--------|
| Insulating material                   | Wemid (PA)       | Colour                                | orange |
| Colour chart (similar)                | RAL 2000         | Insulating material group             | I      |
| Comparative Tracking Index (CTI)      | ≥ 600            | UL 94 flammability rating             | V-0    |
| Contact material                      | Copper alloy     | Contact surface                       | tinned |
| Coating                               | 4-6 µm SN        | Tinning type                          | matt   |
| Layer structure of solder connection  | 4...6 µm Sn matt | Storage temperature, min.             | -40 °C |
| Storage temperature, max.             | 70 °C            | Operating temperature, min.           | -50 °C |
| Operating temperature, max.           | 120 °C           | Temperature range, installation, min. | -25 °C |
| Temperature range, installation, max. | 120 °C           |                                       |        |

## Conductors suitable for connection

|   |                      |
|---|----------------------|
| Clamping range, min.  | 0.13 mm <sup>2</sup> |
| Clamping range, max.  | 6 mm <sup>2</sup>    |
| Wire connection cross section AWG, min.                             | AWG 26               |
| Wire connection cross section AWG, max.                             | AWG 12               |
| Solid, min. H05(07) V-U   | 0.5 mm <sup>2</sup>  |
| Solid, max. H05(07) V-U   | 6 mm <sup>2</sup>    |
| Flexible, min. H05(07) V-K  | 0.5 mm <sup>2</sup>  |
| Flexible, max. H05(07) V-K  | 4 mm <sup>2</sup>    |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.5 mm <sup>2</sup> min. |                      |

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**Technical data**

w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm<sup>2</sup> max.

w. wire end ferrule, DIN 46228 pt 1, 0.5 mm<sup>2</sup> min.

w. wire end ferrule, DIN 46228 pt 1, 2.5 mm<sup>2</sup> max.

Plug gauge in accordance with EN 60999 a x b; ø 2.8 mm x 2.4 mm; 3.0 mm

|  |  |                              |                            |      |
|--|--|------------------------------|----------------------------|------|
| Clampable conductor                    | Cross-section for conductor connection | Type                         | fine-wired                 |      |
|  |  | nominal                      | 0.5 mm <sup>2</sup>        |      |
|  | wire end ferrule                       | Stripping length             | nominal                    | 8 mm |
|  |  | Recommended wire-end ferrule | <a href="#">H0.5/12 OR</a> |      |
|  |  | Stripping length             | nominal                    | 6 mm |
|  |  | Recommended wire-end ferrule | <a href="#">H0.5/6</a>     |      |
|  | Cross-section for conductor connection | Type                         | fine-wired                 |      |
|  |  | nominal                      | 0.75 mm <sup>2</sup>       |      |
|  | wire end ferrule                       | Stripping length             | nominal                    | 8 mm |
|  |  | Recommended wire-end ferrule | <a href="#">H0.75/12 W</a> |      |
|  |  | Stripping length             | nominal                    | 6 mm |
|  |  | Recommended wire-end ferrule | <a href="#">H0.75/6</a>    |      |
| Cross-section for conductor connection | Type                                   | fine-wired                   |                            |      |
|  | nominal                                | 1 mm <sup>2</sup>            |                            |      |
| wire end ferrule                       | Stripping length                       | nominal                      | 8 mm                       |      |
|  | Recommended wire-end ferrule           | <a href="#">H1.0/12 GE</a>   |                            |      |
|  | Stripping length                       | nominal                      | 6 mm                       |      |
|  | Recommended wire-end ferrule           | <a href="#">H1.0/6</a>       |                            |      |

Reference text Length of ferrules is to be chosen depending on the product and the rated voltage., The outside diameter of the plastic collar should not be larger than the pitch (P)

**Rated data acc. to IEC**

|   |                        |   |                   |
|---|------------------------|---|-------------------|
| tested acc. to standard   | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C)                         | 32.5 A            |
| Rated current, max. number of poles (Tu=20°C)                             | 26 A                   | Rated current, min. number of poles (Tu=40°C)                         | 27.5 A            |
| Rated current, max. number of poles (Tu=40°C)                             | 22 A                   | Rated voltage for surge voltage class / pollution degree II/2         | 500 V             |
| Rated voltage for surge voltage class / pollution degree III/2            | 320 V                  | Rated voltage for surge voltage class / pollution degree III/3        | 250 V             |
| Rated impulse voltage for surge voltage class/ pollution degree II/2      | 4 kV                   | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 4 kV              |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 4 kV                   | Short-time withstand current resistance                               | 3 x 1s with 120 A |

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**Technical data**

**Rated data acc. to CSA**

Institute (CSA)



Certificate No. (CSA)

200039-1202191

|                                   |  |
|-----------------------------------|--|
| Rated voltage (Use group B / CSA) | 300 V  |
| Rated current (Use group B / CSA) | 20 A   |
| Wire cross-section, AWG, min.     | AWG 26   |
| Reference to approval values      | Specifications are maximum values, details - see approval certificate. |

|                                   |        |
|-----------------------------------|--------|
| Rated voltage (Use group D / CSA) | 300 V  |
| Rated current (Use group D / CSA) | 10 A   |
| Wire cross-section, AWG, max.     | AWG 12 |

**Rated data acc. to UL 1059**

Institute (UR)



Certificate No. (UR)

E60693

|                                       |  |
|---------------------------------------|--|
| Rated voltage (Use group B / UL 1059) | 300 V  |
| Rated current (Use group B / UL 1059) | 20 A   |
| Wire cross-section, AWG, min.         | AWG 26   |
| Reference to approval values          | Specifications are maximum values, details - see approval certificate. |

|                                       |        |
|---------------------------------------|--------|
| Rated voltage (Use group D / UL 1059) | 300 V  |
| Rated current (Use group D / UL 1059) | 10 A   |
| Wire cross-section, AWG, max.         | AWG 12 |

**Packing**

|           |       |            |        |
|-----------|-------|------------|--------|
| Packaging | Box   | VPE length | 222 mm |
| VPE width | 64 mm | VPE height | 47 mm  |

**Type tests**

|                              |            |  |
|------------------------------|------------|--|
| Test: Durability of markings | Test       | mark of origin, type identification, type of material, approval marking UL, approval marking CSA, durability |
|                              | Evaluation | available  |

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|   |                |  |                               |
|---|----------------|--|-------------------------------|
| Test: Clampable cross section                             | Standard       | IEC 60999-1 section 7 and 9.1 / 11.99, IEC 60947-1 section 8.2.1.5, IEC 603.11 |                               |
|   | Conductor type | Type of conductor and conductor cross-section                                  | solid 0.14 mm <sup>2</sup>    |
|   |                | Type of conductor and conductor cross-section                                  | stranded 0.14 mm <sup>2</sup> |
|   |                | Type of conductor and conductor cross-section                                  | H07V-U4.0                     |
|   |                | Type of conductor and conductor cross-section                                  | H07V-K4                       |
|   |                | Type of conductor and conductor cross-section                                  | AWG 26/1                      |
|   |                | Type of conductor and conductor cross-section                                  | AWG 26/19                     |
|   |                | Type of conductor and conductor cross-section                                  | AWG 12/1                      |
|   |                | Type of conductor and conductor cross-section                                  | AWG 12/19                     |
| Evaluation  | passed         |  |                               |
| Test for damage to and accidental loosening of conductors | Standard       | IEC 60999-1 section 9.4 / 11.99  |                               |
|   | Requirement    | 0.2 kg   |                               |
|   | Conductor type | Type of conductor and conductor cross-section                                  | AWG 26/1                      |
|   |                | Type of conductor and conductor cross-section                                  | AWG 26/19                     |
|   | Evaluation     | passed   |                               |
|   | Requirement    | 0.3 kg   |                               |
|   | Conductor type | Type of conductor and conductor cross-section                                  | H05V-U0.5                     |
|   |                | Type of conductor and conductor cross-section                                  | H05V-K0.5                     |
|   | Evaluation     | passed   |                               |
|   | Requirement    | 0.9 kg   |                               |
|   | Conductor type | Type of conductor and conductor cross-section                                  | H07V-U4.0                     |
|   |                | Type of conductor and conductor cross-section                                  | H07V-K4.0                     |
| Type of conductor and conductor cross-section             |                | AWG 12/1   |                               |
| Type of conductor and conductor cross-section             |                | AWG 12/19  |                               |
| Evaluation  | passed         |  |                               |

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|               |                |   |           |  |
|---------------|----------------|---|-----------|--|
| Pull-out test | Standard       | IEC 60999-1 section 9.5 / 11.99               |           |  |
|               | Requirement    | ≥10 N info@weidmueller.com                    |           |  |
|               | Conductor type | Type of conductor and conductor cross-section | AWG 26/1  |  |
|               |                | Type of conductor and conductor cross-section | AWG 26/19 |  |
|               | Evaluation     | passed  |           |  |
|               | Requirement    | ≥20 N   |           |  |
|               | Conductor type | Type of conductor and conductor cross-section | H05V-U0.5 |  |
|               |                | Type of conductor and conductor cross-section | H05V-K0.5 |  |
|               | Evaluation     | passed  |           |  |
|               | Requirement    | ≥60 N   |           |  |
|               | Conductor type | Type of conductor and conductor cross-section | H07V-U4.0 |  |
|               |                | Type of conductor and conductor cross-section | H07V-K4.0 |  |
|               |                | Type of conductor and conductor cross-section | AWG 12/1  |  |
|               |                | Type of conductor and conductor cross-section | AWG 12/19 |  |
|               | Evaluation     | passed  |           |  |

**Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002643    | ETIM 7.0    | EC002643    |
| ETIM 8.0    | EC002643    | ECLASS 9.0  | 27-44-04-01 |
| ECLASS 9.1  | 27-44-04-01 | ECLASS 10.0 | 27-44-04-01 |
| ECLASS 11.0 | 27-46-01-01 | ECLASS 12.0 | 27-46-01-01 |

**Important note**

IPC conformity Conformity: The products are developed, manufactured and delivered according international recognized standards and norms and comply with the assured properties in the data sheet resp. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request.

- Notes
- Rated current related to rated cross-section & min. No. of poles.
  - Wire end ferrule without plastic collar to DIN 46228/1
  - Wire end ferrule with plastic collar to DIN 46228/4
  - P on drawing = pitch
  - Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards.
  - Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

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## Technical data

## Approvals

Approvals



|                       |            |
|-----------------------|------------|
| ROHS                  | Conform    |
| UL File Number Search | UL Website |
| Certificate No. (UR)  | E60693     |

## Downloads

|   |   |
|---|---|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of the Manufacturer</a>   |
| Engineering Data                            | <a href="#">CAD data – STEP</a>   |
| Engineering Data                            | <a href="#">WSCAD</a>   |
| Product Change Notification                 | <a href="#">PCN_2017_236_PL32_Optimierung_LL_5.0x_DE</a><br><a href="#">PCN_2017_236_PL32_Optimization_of_LL_5.0x_EN</a><br><a href="#">20211116 Änderung der Verpackung LL 5.0x and LM 5.0x</a><br><a href="#">20211116 Change of packaging to LL 5.0x and LM 5.0x</a>   |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>  |
| Brochures                                   | <a href="#">FL DRIVES EN</a><br><a href="#">FL ANALO.SIGN.CONV. EN</a><br><a href="#">MB DEVICE MANUF. EN</a><br><a href="#">FL DRIVES DE</a><br><a href="#">FL BUILDING SAFETY EN</a><br><a href="#">FL APPL LED LIGHTING EN</a><br><a href="#">FLIndustr.CONTROLS EN</a><br><a href="#">FL MACHINE SAFETY EN</a><br><a href="#">FL HEATING ELECTR EN</a><br><a href="#">FL APPL INVERTER EN</a><br><a href="#">FL_BASE_STATION_EN</a><br><a href="#">FL ELEVATOR EN</a><br><a href="#">FL POWER SUPPLY EN</a><br><a href="#">FL 72H SAMPLE SER EN</a><br><a href="#">PO OMNIMATE EN</a><br><a href="#">PO OMNIMATE EN</a> |

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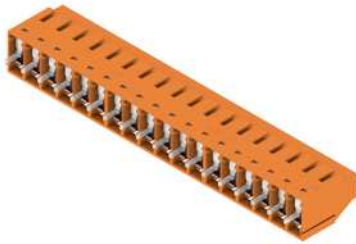
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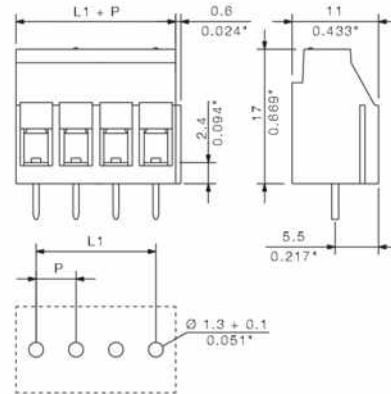
Fax. +49 5231 14-2083

**Drawings**

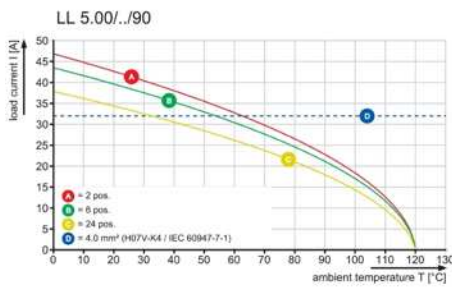
**Product image**



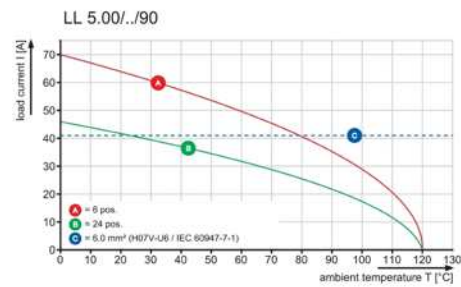
**Dimensional drawing** [info@weidmueller.com](mailto:info@weidmueller.com)



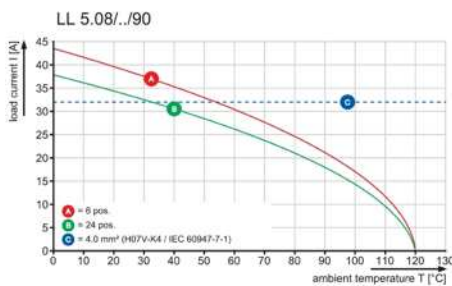
**Graph**



**Graph**



**Graph**

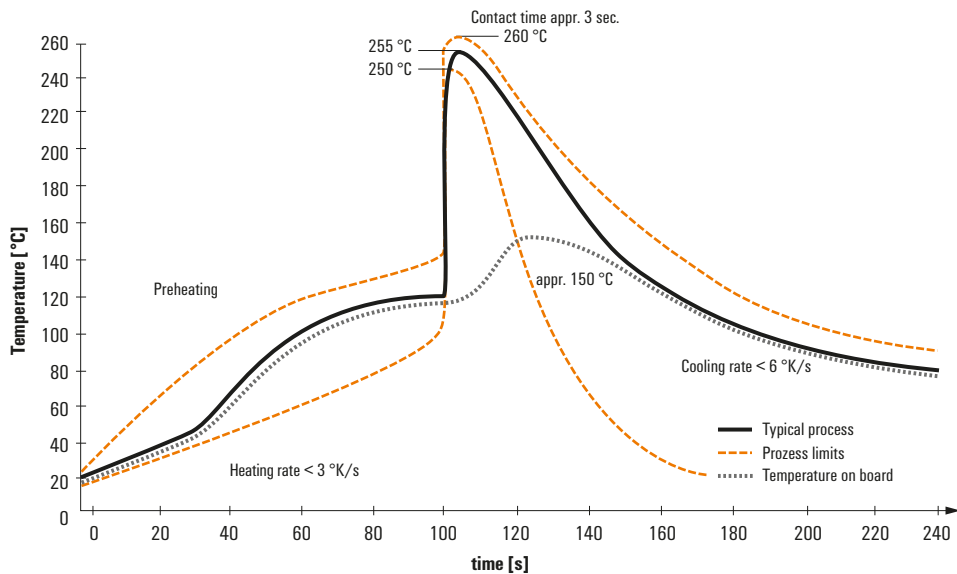




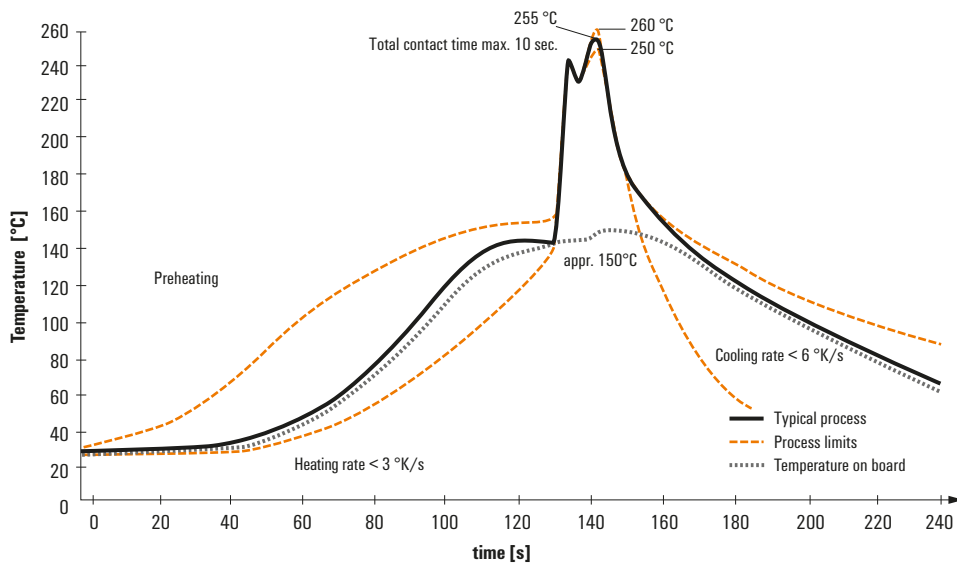
## Recommended wave soldering profiles

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 Germany  
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 Fax: +49 5231 14-292083  
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### Single Wave:



### Double Wave:



### Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:

- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.